

NEW PARMELIAE (LICHENES) FROM AFRICA

Mason E. Hale, Jr.

Smithsonian Institution, Washington, D.C. 20560

Parmelia neodissecta Hale, sp. nov.

Thallus laxe adnatus, corticola, 3-7 cm latus, fragilis, albedo- vel olivaceo-cinereus, lobis sublinearibus vel subirregularibus, 1-3 mm latis, aetate late revolutis, superne nitidus, dense isidiatus, isidiis cylindricis, simplicibus, raro apice ciliatis, cortex superior 12-14 $\mu$  crassus, stratum gonidiale 10-15 $\mu$  crassum, medulla alba, 60-80 $\mu$  crassa, cortex inferior 12-14 $\mu$  crassus, subtus niger, modice aut dense rhizinosus, rhizinis dichotome ramosis. Apothecia adnata, cupuliformia, 4-6 mm diametro, sporis octonis, 6-8 X 12-14 $\mu$ . Cortex K+ flavescens, medulla K-, P-, C+ rosea, atranorinum et acidum gyrophoricum continente.

Holotype: About 6 km southeast of Zouépo, Mts. Nimba, cercle of N'Zérékoré, Guinea, collected by R. Santesson, no. 10597d, 10 August 1954, elev. 1550 m (UPS; isotype in US) (Fig. 1).

This lichen belongs in section Hypotrachyna, but it seems at first to be P. dissecta Nyl., a pantropical species in section Imbricaria which contains gyrophoric acid and has cilia. On closer examination, however, the rhizines are clearly dichotomously branched and marginal cilia are lacking (although branched rhizines may project somewhat from the margin). Parmelia dissecta has simple rhizines and distinct marginal cilia. We may have here a case of convergent evolution where two unrelated species classified in different sections on the basis of rhizine branching and cilia have extremely similar appearance and identical chemistry. I do not believe that we are simply dealing with an aberrant form of P. dissecta, for the five collections of P. neodissecta are easily distinguishable.

Specimens examined. Africa. Kenya: Kisumu-Londiani, Nyanza Prov., Tinderet Forest Reserve, Maas Geesteranus G11163 (L, US); Union of South Africa: Deepwalls Forest Reserve, Knysna div., Degelius SA-221 (Degelius herbarium), Maas Geesteranus G12166 (L, US). India: Tiger Hill, Darjeeling, Awasthi 3886 (Awasthi herbarium).

Parmelia neutralis Hale, sp. nov.

Thallus adnatus, corticola, 8-14 cm latus, coriaceus, viridi-



Figure 1. Parmelia neodissecta Hale (holotype, X2).

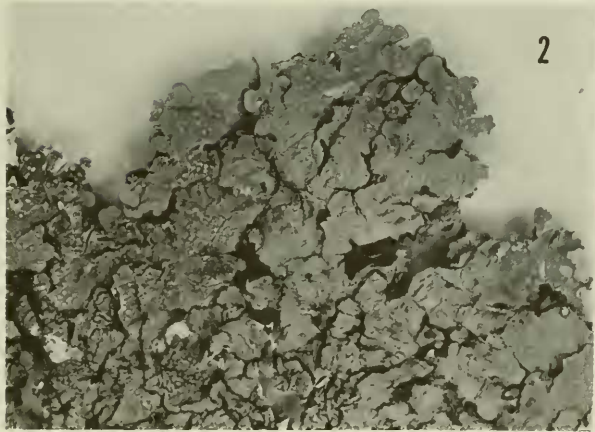


Figure 2. Parmelia neutralis Hale (holotype, X2).

albus, lobis latis, subrotundatis, 4-6 mm latis, pseudocyphellatis, pseudocyphellis elongatis, 0.1-0.5 mm longis, superne planus vel rugosus, soredians, soraliis orbicularibus, laminae atque margine positae, 0.3-0.5 mm diametro, sorediis granulosis, aetate rimosus, cortex superior 10-12 $\mu$  crassus, stratum gonidiale 25-30 $\mu$  crassum, medulla alba, 100-120 $\mu$  crassa, cortex inferior 10-15 $\mu$  crassus, subtus pallide castaneus, sparse vel modice rhizinosus, rhizinis pallidis, simplicibus. Apothecia ignota. Cortex K+ flavescens, medulla K-, P-, C-, KC-, atranorinum et acidum aliphaticum ignotum continente.

Holotype: Deepwalls Forest Reserve, Knysna distr., Cape Prov., Union of South Africa, collected by R. A. Maas Geesteranus, no. 12177, 5 Dec. 1949 (L; isotypes in LD, US) (Fig. 2).

Parmelia neutralis, a species in section Simplices, superficially resembles P. borrieri (Sm.) Turn. because of the laminal punctiform soralia and small pseudocyphellae but the lower surface is pale brown and the thallus as a whole more coriaceous and adnate. There are large transverse cracks where the cortex tends to turn up slightly, forming a broad fissure. The chemistry is still unclear but the fatty acid is probably near caperatic acid, placing the species close to P. bolliana Müll. Arg. which is also rather coriaceous. Parmelia neutralis is known so far only in Africa.

Specimens examined. Uganda: 10 km NW of Kilembe, slopes of Ruwenzori, Swinscow 2U 12/35 (US). Congo: Lake Kivu, Mulungu, S. Kivu, Degelius (Degelius herbarium). Union of South Africa: Zoutpansberg, Transvaal, Watson 778 (PRE), Impendhle, Upper Umkomaas, Höeg (TRH, US), slopes of Muizenberg, Cape, Pillans 3865 (BM).